

CLAIMS:

1. An electrical device (1) comprising a substrate (7) carrying at least one component (3) comprising at least one electrode (8, 11), a first connecting line (4) electrically connected to said electrode, wherein said first connecting line (4) bridges a second connecting line (5) by means of a crossover (14), characterised in that the crossover (14) is, at least at one side, bounded by an electrically insulating structure (17).
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2. An electrical device (1) according to claim 1, wherein said electrically insulating structure (17) extends into a direction substantially perpendicular to said substrate (7) and comprises at least one overhanging portion projecting in a direction substantially parallel to the surface of said substrate (7).
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3. An electrical device (1) according to claim 1, wherein said crossover (14) is, preferably completely, surrounded by said electrically insulating structure (17).
- 15 4. An electrical device (1) according to claim 1, wherein said electrical device (1) comprises several first connecting lines (4), at least some of said first connecting lines (4) having a crossover (14) with at least said second connecting line (5), wherein each crossover (14) is bounded by an electrically insulating structure (17).
- 20 5. An electrical device (1) according to claim 1, wherein said electrical device (1) is an electroluminescent display device and said component (3) is a display pixel.
6. An electrical device (1) according to claim 5, wherein said display pixel comprises a first electrode (8), an electroluminescent material (10) and a second electrode (11), said first or second electrode being connected to said first connecting line (4).
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7. An electrical device (1) according to claim 1, wherein said electrical device (1) is an integrated circuit.

8. An electrical device according to claim 7, wherein said substrate is made of glass.

9. A method for manufacturing an electrical device (1) comprising a crossover (14) of at least a first connecting line (4) over at least a second connecting line (5), at least one of said connecting lines connecting to an electrical device (1), comprising the steps of:

- forming, either simultaneously or successively, said first connecting line (4) and said second connecting line (5) for said device (1) on a substrate (7);
- depositing an insulating layer (15) on or over said first connecting line (4) and said second connecting line (5), at least at the positions where said crossover (14) is to be formed,
- defining or creating openings (16) in said insulating layer (15) at positions where electrical contacts are to be provided with said first connecting line (4) and a connection point (13),
- forming electrically insulating structures (17) which, at least partially, bound the area where said crossover (14) is to be formed,
- depositing an electrically conductive layer (18) to connect said first connecting line (4) to said connecting point (13), which connecting point (13) may be connected to another second connecting line (5).

10. A method according to claim 9, wherein said electrically insulating structure (17) is formed so as to extend in a direction substantially perpendicular to said substrate (7) and to comprise at least one overhanging portion projecting in a direction substantially parallel to the surface of said substrate (7).

11. A method according to claim 9, wherein said electrically insulating structure (17) surrounds the crossover (14).

12. A method according to claim 9, wherein said electrical device (1) is an electroluminescent display device having at least one display pixel (3) comprising a first electrode (8), an electroluminescent material (10) and a second electrode (11), said method further comprising the steps of:

- forming said first electrode (8) simultaneously with said first connecting line (4) and/or said second connecting line (5),

- forming an electroluminescent layer (10) on or over said first electrode (8), at least at the positions where display pixels (3) are to be formed,
 - forming said second electrode (11) simultaneously with said electrically conductive layer (18), at least at the positions where said display pixel is to be formed, so as to connect
- 5 said first or second electrode (8; 11) with said first connecting line (4).

13. A method according to claim 12, wherein said electroluminescent layer (10) is formed after said formation of said electrically insulating structure (17).

10 14. A method according to claim 9, wherein said electrical device (1) is an integrated circuit and said first connecting line (4) is connected to said integrated circuit.

15. A method according to claim 14, wherein said integrated circuit is made on a glass substrate.

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16. Test structure for testing a display panel (2) comprising at least a first set of electrodes (8; 11) and a second set of electrodes (8'; 11', 11''), wherein said test structure (23; 25) is adapted to separately connect to said first set of electrodes (8; 11) and said second set of electrodes (8'; 11', 11'') simultaneously from a single side of the display panel (2).

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17. Test structure according to claim 16, wherein said test structure (23; 25) comprises multiple comb structures each comprising multiple first connecting lines (4, 4', 4'') and a second connecting line (5; 5') wherein crossovers (14) for said first connecting lines (4, 4', 4'') and second connecting lines (5; 5') are used to enable connection of said test structure

25 (23; 25) to said single side of the display panel (2).

18. Test structure according to claim 17, wherein said crossover (14) is formed by an electrically conductive layer (18) deposited on or over an insulating layer (15) having openings (16) to said first or second connecting lines.

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19. Test structure according to claim 18, wherein electrically insulating structures (17) separate at least some of said openings (16).

20. Method for manufacturing a test structure (23; 25) according to any of the claims 16-19 using one or more steps of the method of manufacturing a crossover according to any of the claims 9-11.

5 21. Method for testing a display panel (2) or display pixel (3) wherein a test structure (23; 25) according to any of the claims 16-19 is used.